

REMARKS

Claims 5-7 are in this Applica for reconsideration. By this Amendment, Applicant has cancelled claims 1-4, amended claim 5 and added new claims 6 and 7. Claim 6 combines the features of the previous claims 1 and 3. Claim 7 is similar to the canceled claim 4.

Information Disclosure Statement

The Patent Office failed to consider the information disclosure statement filed on 11/18/2003 because, according to the Patent Office, it fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56) most knowledgeable about the content of the information, of each patent listed that is not in the English language.

In response, Applicant submits herewithin a rough translation of claims of No. H6-37097.

35 U.S.C. §112

Claims 3 and 4 have been rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. According to the Office Action, the claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Specifically, the Office Action states that the specification fails to provide an adequate written description of an "olefinbased reformer", because it is unclear from the

specification what function an olefin-based reformer performs or what are some examples of an olefin-based reformer.

It is Applicant's position that the new claims have clarified the above issue. If the Patent Office is still unclear about the "olefinbased reformer", Applicant requests that the Examiner contact the Applicant's representative at the number listed below.

35 U.S.C. §112

Claim 4 has been rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, according to the Office Action, in claim 4, "the polypropylene-based resin and polyethylene-based resin" lack antecedence.

In addition, the Office Action states that in claim 4, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention.

Applicant has canceled claim 4 to overcome this rejection.

Claim Rejections - 35 USC § 102

Claims 1 and 2 have been rejected under 35 U.S.C. 102(b) as being clearly anticipated by Tanaka et al. '091.

There are several differences between the present invention and Tanaka(No. 5700091).

(1) Purposes of Tanaka are:

- a. to provide a linear cut operation along with a openings of a bag.
- b. to prevent an aluminum foil of a bag body from being damaged when a bag including aluminum foil is formed.
- c. to prevent creases from being produced on a fusing portion of a band-like base portion and a bag body.

(2) On the other hand, the present invention is divisional application based on a method of production in US. patent application No.10/191847 that has been allowed as U.S. patent No.6808666.

When a zipper tape having a structure allowing formation of a plurality of pairs of a male stripe and a female stripe each pair extending in a row on a base tape with large width is applied to a bag, generally the zipper tape needs to be made from same type of resin as an innermost layer of the bag, though in practice the innermost layer may be made from a polypropylene-based resin or a polyethylene-based resin according to circumstances. The purpose of the present invention is to solve the above problem and provide a zipper tape compatible with any type of innermost layers of bags.

(3) As mentioned above, the zipper tape described in the present invention (new claims) is different from Tanaka in the structure of the base tape.

A snap fastener of Tanaka is defined in Claim 1,2 and 3 and Tanaka further discloses in paragraph 2, line 13 that it is preferable that the resin film of the first layer is the same type of resin film as resin used for sealant, but, may be different type of resin film having a fine

adhesive, further in paragraph 2, line 24 that it is preferable for resin film of the second layer to be chosen, from the view of transparency, Ny, PP and PET, with Ny being the most preferable in considering the linear cut operation and further in paragraph 2, line 50 that the resin film of the third layer is preferably a film of the same type resin as the resin of the snapping portion, if possible to fuse, a different resin film from the resin of the snapping portion may be used and it is also preferable that the resin film of the third layer has approximately the same or higher melting point as that of the resin film of the first layer

On the other hand, the present invention has two different points from Tanaka.

First: Referring to Fig. 5 A in the present invention, in the case of known arts in which a mating section 3 is made from PE-based resin and films 8 are also made from PE-based resin, if the opposing thermally fused films 8 (films 4 in Fig. 3C) are off each other as shown in Fig. 5 B (same as Fig. 3C) while side seals 1a and b of a bag 1 are being formed, films 8 does not apply to an innermost layer 5 of a bag made from a PP-based resin and such a bag is not available because of pin holes.

In the case of known arts in which the mating section 3 is made from PP-based resin, films 8 does not apply to an innermost layer 5 of a bag made from a PE-based resin for same reason.

To solve the above problem, the present invention presents the zipper tape which can be used to any type of bags as shown in new Claim 1 (original Claim 3) and the followings are defined in new Claim 1.

a. A resin in which a PE-based resin, PP-based resin and an olefin-based resin such as

a polybutene are mixed.

b. A resin in which a PE-based resin, PP-based resin and a polystyrene-based resin are mixed.

c. A resin in which an ethylene acetate vinyl copolymer resin, a PE-based resin and an olefin-based resin as third component are mixed.

The zipper tape mentioned above is not claimed in Tanaka at all. Although it is described additionally in Tanaka that if possible to fuse, a different resin film from the resin of the snapping portion may be used to the resin film of the third layer, people skilled in the art can not expect the above a.-c..

Second: Referring to Fig 5A, in the case that film 7 thermally fused to an innermost layer 5 of a bag 1 is made from a PE-based resin;

in known arts the film 7 can not be available except for bags made from PE-based resin and does not apply to bags made from PP-based resin because of disability of thermally fusing.

In the case that the film 7 is made from PP-based resin, it does not apply to a inner most layer 5 made from PE-based resin for same reason.

To solve the above problem, the present invention claims the zipper tape which can be used to any type of bags as shown in new Claim 2(original Claim4).

Tanaka does not refer to the zipper tape and the purpose thereof mentioned above. Tanaka only describes additionally that the resin film of the first layer may be a resin film having a fine adhesive and this does not indicate Claim 2 of the present invention.

Claim Rejections - 35 USC § 103

Claims 3 and 4 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al. '091. According to the Office Action, Tanaka et al. discloses the claimed invention except for the thermally fused film 15 being a polypropylene-based resin and/or polyethylene-based resin with an olefinbased resin including polybutene or polystyrene as a third component. Thus, the Patent Office takes the position that it would have been obvious to one having ordinary skill in the art at the time the invention was made to use a polypropylene-based resin and/or polyethylene-based resin with an olefinbased resin including polybutene or polystyrene as a third component for the thermally fused film of Tanaka et al., since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

Furthermore, the Patent Office takes the position that the Tanaka et al. discloses the claimed invention except for the thermally fused film 15 being a resin comprising an ethylene acetate vinyl copolymer resin, a polyethylene-based resin and an olefin-based reformer and further postulates that it would have been obvious to one having ordinary skill in the art at the time the invention was made to use a resin comprising an ethylene acetate vinyl copolymer resin, a polyethylene-based resin and an olefin-based reformer for the thermally fused film of Tanaka et al., since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice.

Claim 5 has been rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al. '091. According to the Office Action, Tanaka et al. discloses the claimed invention except for the innermost layer 28 of the bag and at least the thermally fused film 15 being made from EAA, ethylenemetacrylic acid copolymer metallic ion bridging resin or EMAA, and the Patent Office further postulates that it would have been obvious to one having ordinary skill in the art at the time the invention was made to use EM, ethylene-metacrylic acid copolymer metallic ion bridging resin or EMAA for the innermost layer of the bag and at least the thermally fused film in Tanaka et al., since it has been held. to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice.

Because the Tanaka et al does not anticipate the present invention, it is Applicant's position that the Tanake in combination with the above references do not suggest the present invention as well.

Furthermore, there must be some suggestion or teaching in the prior art as a whole which would lead the person of ordinary skill in the art to provide the combination as claimed. As the prior art as a whole fails to direct the person of ordinary skill in the art toward the claimed combination, the invention should be considered not anticipated, non-obvious and thus patentable.

Therefore, Applicant finds that the above references do not anticipate the current invention and there is no suggestion or motivation to use the teachings of the references to provide the combination as claimed.

As the prior art fails to suggest the combination of features as claimed, Applicant respectfully requests that the Examiner favorably consider the claims as now presented in view of the new claims and in view of the discussion above. Applicant respectfully solicits allowance of this application.

It is applicant's position that all claims are now allowable. Should the Examiner determine that issues remain that have not been resolved by this response, the Examiner is requested to contact Applicant's representative at the number listed below.

Favorable action is requested.

Respectfully submitted
for Applicant,

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SHOULD ANY OTHER FEE BE REQUIRED, THE PATENT AND TRADEMARK OFFICE IS HEREBY REQUESTED TO CHARGE SUCH FEE TO OUR DEPOSIT ACCOUNT 13-0410.

Rough translation of Claims of No.H6-37097

What is claimed is:

1. A method for producing a bag with a zipper tape comprising,
bonding a heat-insulating film(8,8a) having a higher melting point than the zipper tape(A,B) on outside of the zipper tape(A,B) and bonding a film for fusing (4,4a) having a lower melting point than the heat-insulating film(8,8a) on outside of the heat-insulating film(8,8a);
inserting the zipper tape body(1,1a) into an opening portion of the bag body(3,3a);
pressing both outsides of the bag body(3,3a) with a sealer(9,9a) having a depressed portion in same line as a mating section(2), and
heat-sealing the zipper tape body(1,1a) and the bag body(3,3a) in continuously running state without separator(5,5a).
- 2 A method for producing a bag with a zipper tape according to claim 1 further comprising bonding a heat-insulating film(8,8a) having a higher melting point than the zipper tape(A,B)on outside of the zipper tape body(1,1a) and bonding a film for fusing(4,4a) having a lower melting point than the heat-insulating film on outside of the heat-insulating film(8,8a)

(著誌+要約+請求の範囲)

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(56)【参考文献】
【文献】実開昭59-10240(JP, U)
【文献】実開平1-134037(JP, U)

BEST AVAILABLE COPY**【特許請求の範囲】**

【請求項1】ジッパーテープにおけるテープ部分の外側に、このテープ部分よりも高融点の遮熱用フィルムを貼り合わせると共にこの遮熱用フィルムの外側に遮熱フィルムよりも低融点の融着用フィルムを貼り合わせる、前記ジッパーテープを袋本体フィルムの開口部位内に挿入する、袋本体フィルムの外側から、咬合部に当る部分に逃げを形成したシーラーで挟圧することにより、セパレータを入れないでジッパーテープと袋本体フィルムとを連続走行状態でヒートシールする、ことを特徴とするジッパーテープ付袋の製造方法。

【請求項2】ジッパーテープ部分の外側に、このジッパーテープ部分よりも高融点の遮熱用フィルムを貼り合わせると共に更にこの遮熱用フィルムの外側に、この遮熱用フィルムよりも低融点の融着用フィルムを貼り合わせて成るジッパーテープ。

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詳細な説明

【発明の詳細な説明】

【産業上の利用分野】

本発明は、雄条と雌条から成る咬合部を形成した所謂ジッパーテープ及びこのジッパーテープ付袋の製造方法に関するものである。

【従来の技術】

従来のジッパーテープは、ポリエチレン(PE)又はポリプロピレン(PP)単体で、その咬合部とテープ部分で構成されている。

このためジッパーテープを袋本体フィルムの開口部位内に取り付ける場合に、袋本体フィルムがPE又はPPである場合はそのまま直接ヒートシールが可能であるが、袋本体フィルムがナイロンとかポリエステル或いはアルミ箔等の場合には、この内面にジッパーテープ側と相溶性を有するフィルムを貼り合わせている。

第2図は、従来のジッパーテープ付袋の製造方法を示すもので、1、1aはジッパーテープ、2は咬合部、3、3aは袋本体フィルム、4、4aは袋本体フィルム3、3aの内側に貼り合わせたジッパーテープ1、1aと同質の融着用フィルム、5、5aはセパレーター、6、6aはシーラーにして、セパレーター5、5aにてジッパーテープ1、1aのテープ部分A・Bが相互に融着しないようにしながらシーラー6、6aで挟圧することによりジッパーテープ1、1aのテープ部分A・Bを袋本体フィルム3、3a側にヒートシールしており、このヒートシールしている間はテープとフィルムの走行は止まっている。

【従来の技術の問題点】

このため、次のような問題がある。

a. ラインの流れが間欠的となり、生産性が上がらない。

b. ジッパーテープのテープ部分A・Bが薄いとヒートシール時にこのテープ部分A・Bに熱が通って溶融してしまい、咬合部が変形したりして機能しなくなる心配がある。そこで、従来はPEで150～200 μ 、PPで120～180 μ の厚みを確保していたが、ジッパーテープ部分A・Bの厚みが増すと、袋のサイドシールを行う際に、このジッパーテープ部分A・Bの厚み分サイドシール用のシーラーの温度を上げなければジッパーテープ部分A・Bにおいてシールが不完全となり、ピンホールが発生したりするという問題がある。一方、このようにジッパーテープ部分A・Bのためにシーラーの温度を上げると、他の部分においては過剰熱となり、溶融過多の問題が発生する。

c. ジッパーテープは材質的にヒートシール可能なPE、PP等で作られているため、耐熱性に劣り、例えば電子レンジ等で解凍或いは調理する食品用袋には用いることができない場合がある。

d. その他、ジッパーの外側に直接融着用のフィルムを貼り合わせ、これと袋本体側のフィルムを融着するようにした技術(実開昭59-10240号公報及び実開平1-134037号公報)が公知であるが、このようにジッパーテープの外側に直接融着用のフィルムを貼り合わせた場合、ジッパーテープ部分A・B側の厚さをあまり薄く形成すると、ヒートシール時の熱の影響を無視できなくなり、ジッパー性能が低下することから、薄さには限界がある。しかし、強度的には薄くてもよいものも多い。

本発明は、連続生産が可能であると共にジッパーテープにおけるテープ部分の厚みを薄くして袋のサイドシール時におけるシーラーの温度を高めないで済み、更に耐熱性に優れたジッパーテープとこのジッパーテープ付袋の製造方法を提案するのが目的である。

【課題を解決するための手段】

本発明の構成は次のとおりである。

(1) ジッパーテープにおけるテープ部分の外側に、このテープ部分よりも高融点の遮熱用フィルムを貼り合わせると共にこの遮熱用フィルムの外側に遮熱フィルムよりも低融点の融着用フィルムを貼り合わせる、前記ジッパーテープを袋本体フィルムの開口部位内に挿入する、袋本体フィルムの外側から、咬合部に当る部分に逃げを形成したシーラーで挟圧することにより、セパレーターを入れないでジッパーテープと袋本体フィルムとを連続走行状態でヒートシールすることを特徴とするジッパーテープ付袋の製造方法。

(2) ジッパーテープ部分の外側に、このジッパーテープ部分よりも高融点の遮熱用フィルムを貼り合わせると共に更にこの遮熱用フィルムの外側に、この遮熱用フィルムよりも低融点の融着用フィルムを貼り合わせて成るジッパーテープ。

【作用】

袋本体フィルムの開口部位内にジッパーテープを挿入し、融着用フィルムの融点まで加熱されたシーラーで袋本体フィルムの外側から挟圧すると、袋本体フィルム側の融着用フィルムとジッパーテープ側の融着用フィルムのみが融着し、遮熱用フィルムで遮熱されてジッパーテープ側は相互に融着するに至らない。この結果、セパレーターは不要となり、シーラーを移動タイプ又はロールタイプとすることにより、連続的に走行させながらジッパーテープを袋本体フィルムに取り付けることが可能である。

【実施例】

第1図は本発明の実施例にして、凹条と凸条から成る咬合部2を形成したポリエチレン製のジッパーテープ1、1aのテープ部分A・Bの外側にポリエステル製遮熱用フィルム8、8aを貼り合わせ、更にこの外にポリエチレン製の融着用フィルム7、7aを貼り合わせ、これと袋本体フィルム3、3a側の内面に張り合わせたポリエチレン製の融着用フィルム4、4aをヒートシールする。

ヒートシール法としては、袋本体フィルム3、3aとジッパーテープ1、1aはロールから連続的に供給し、走行中に咬合部2を切り欠いたロールタイプのシーラー9、9aでジッパーテープ1、1aのテープ部分A・Bと袋本体フィルム3、3aとを挟圧し、この間にヒートシールするものである。

【発明の効果】

本発明は以上の如き構成と作用から成るため、次の如き効果を奏する。

a. 袋本体フィルムに対してジッパーテープを連続的にヒートシールすることができるので、生産性が向上する。

b. ジッパーテープにおけるテープ部分の肉厚を融着フィルムを含めて100 μ 程度まで薄くできるので、この分袋のサイ

ドシール時のシール温度を上げないで済み、ジッパーテープ部分以外における溶融過多によるピンホール等の問題がなくなる。
c. ジッパーテープを融点の高い材質にできるので、電子レンジ等で使用する耐熱性袋にジッパーテープを用いた場合でも、このジッパーテープの咬合部が融着したり、変形したりせず、開封及び再使用が可能である。

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図の説明

【図面の簡単な説明】

第1図はジッパーテープにおけるテープ部分の外に高融点の遮熱用フィルムを貼り合わせ、更にこの外に遮熱用フィルムよりも低融点の融着用フィルムを貼り合わせて袋本体フィルム側にヒートシールした状態の断面図、第2図2図は従来例の説明図である。1、1a……ジッパーテープ、2……咬合部

3、3a……袋本体フィルム

4、4a……融着用フィルム

5、5a……セパレーター、6、6a……シーラー

7、7a……融着用フィルム

8、8a……遮熱用フィルム

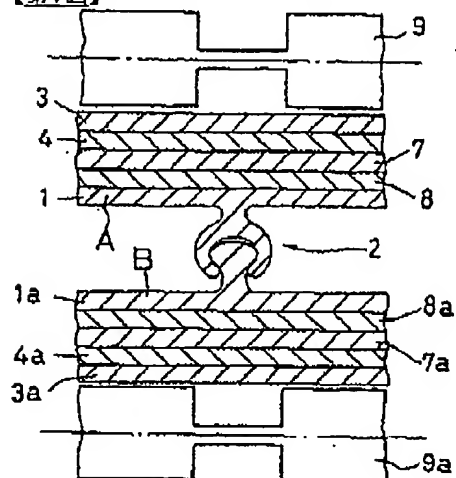
9、9a……ロールタイプのシーラー

A・B……ジッパーテープ部分

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図面

【第1図】



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【第2図】

